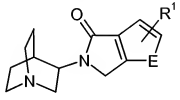
**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application.

WHAT IS CLAIMED IS:

1-2.(canceled)

3.(currently amended) A compound ~~according to claim 1,~~ in accord with formula II:



II

wherein:

E represents or $CH_2$, NH, O or S;

$R^1$ is selected from hydrogen, halogen or a substituted or unsubstituted 5- or 6-membered aromatic or heteroaromatic ring having 0, 1 or 2 nitrogen atoms, 0 or 1 oxygen atoms, and 0 or 1 sulfur atoms, or selected from a substituted or unsubstituted 8-, 9- or 10-membered fused aromatic or heteroaromatic ring system having 0, 1, 2 or 3 nitrogen atoms, 0 or 1 oxygen atoms, and 0 or 1 sulfur atoms, said aromatic or heteroaromatic rings or ring systems, when substituted, having substituents selected from -$C_1$-$C_6$alkyl, -$C_3$-$C_6$cycloalkyl, -$C_1$-$C_6$alkoxy, -$C_2$-$C_6$alkenyl, -$C_2$-$C_6$alkynyl, halogen, -CN, -$NO_2$, -$CF_3$, -$S(O)_mR^2$ wherein m is 0, 1 or 2, -$NR^2R^3$, -$NR^2(CO)R^3$, -$CH_2NR^2R^3$, $OR^2$, -$CH_2OR^2$, -$C(O)NR^2R^3$, or -$CO_2R^4$;

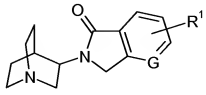
$R^2$ and $R^3$ are independently selected at each occurrence from hydrogen, -$C_1$-$C_4$alkyl, -$C_1$-$C_4$alkoxy, -$C_3$-$C_6$cycloalkyl, aryl, heteroaryl, -$C(O)R^4$, -$CO_2R^4$ or -$SO_2R^4$, or

$R^2$ and $R^3$ in combination is -$(CH_2)_jG(CH_2)_k$- or -$G(CH_2)_jG$- wherein G is oxygen, sulfur, $NR^4$, or a bond, j is 0, 1, 2, 3 or 4 and k is 0, 1, 2, 3 or 4, and

$R^4$ is independently selected at each occurrence from hydrogen, -$C_1$-$C_4$alkyl, aryl, or heteroaryl;

or a stereoisomer, enantiomer, *in vivo*-hydrolysable precursor or pharmaceutically-acceptable salt thereof.

4.(Currently amended.) A compound ~~according to claim 2,~~ in accord with formula III:




III

wherein:

G represents CH or N;

$R^1$ is selected from ~~hydrogen,~~ halogen or a substituted or unsubstituted 5- or 6-membered aromatic or heteroaromatic ring having 0, 1 or 2 nitrogen atoms, 0 or 1 oxygen atoms, and 0 or 1 sulfur atoms, or selected from a substituted or unsubstituted 8-, 9- or 10-membered fused aromatic or heteroaromatic ring system having 0, 1, 2 or 3 nitrogen atoms, 0 or 1 oxygen atoms, and 0 or 1 sulfur atoms, said aromatic or heteroaromatic rings or ring systems, when substituted, having substituents selected from -$C_1$-$C_6$alkyl, -$C_3$-$C_6$cycloalkyl, -$C_1$-$C_6$alkoxy, -$C_2$-$C_6$alkenyl, -$C_2$-$C_6$alkynyl, halogen, -CN, -$NO_2$, -$CF_3$, -$S(O)_mR^2$ wherein m is 0, 1 or 2, -$NR^2R^3$, -$NR^2(CO)R^3$, -$CH_2NR^2R^3$, $OR^2$, -$CH_2OR^2$, -$C(O)NR^2R^3$, or -$CO_2R^4$;

$R^2$ and $R^3$ are independently selected at each occurrence from hydrogen, -$C_1$.$C_4$alkyl, -$C_1$-$C_4$alkoxy, -$C_3$-$C_6$cycloalkyl, aryl, heteroaryl, -$C(O)R^4$, -$CO_2R^4$ or -$SO_2R^4$, or

$R^2$ and $R^3$ in combination is -$(CH_2)_jG(CH_2)_k$- or -$G(CH_2)_jG$- wherein G is oxygen, sulfur, $NR^4$, or a bond, j is 0, 1, 2, 3 or 4 and k is 0, 1, 2, 3 or 4, and

$R^4$ is independently selected at each occurrence from hydrogen, -$C_1$-$C_4$alkyl, aryl, or heteroaryl;

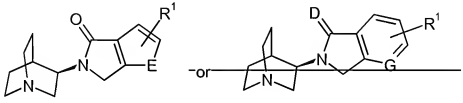
or a stereoisomer, enantiomer, *in vivo*-hydrolysable precursor or pharmaceutically-acceptable salt thereof.

5.(previously presented) A compound according to claim 3, wherein,

$R^1$ is selected from hydrogen, halogen and substituted or unsubstituted phenyl, pyridyl, quinolinyl, piperazinyl or morpholinyl, said phenyl, pyridyl, quinolinyl, piperazinyl or morpholiny, when substituted, having substituents selected from -$C_1$-$C_6$alkyl, -$C_3$-$C_6$cycloalkyl, -$C_1$-$C_6$alkoxy, -$C_2$-$C_6$alkenyl, -$C_2$-$C_6$alkynyl, halogen, -CN, -$NO_2$, -$CF_3$, -$S(O)_mR^2$ wherein m is 0, 1 or 2, -$NR^2R^3$, -$CH_2NR^2R^3$, -$OR^2$, -$CH_2OR^2$ or -$CO_2R^4$.

6.(original) A compound according to claim [[2]]3, wherein:

said compound is an R-stereoisomer in accord with formula IV ~~or V;~~




IV [[V]], or a pharmaceutically-acceptable salt thereof.

7.(currently amended) A compound selected from:

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-phenyl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-5-(4-methyl-piperazin-1-yl)-2,3-dihydro-isoindol-1-one;

5-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-2-phenyl-5,6-dihydro-furo[2,3-*c*]pyrrol-4-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-bromo-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-pyridin-3-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-pyridin-4-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-5-bromo-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-5-phenyl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-5-pyridin-3-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-5-pyridin-4-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-4-bromo-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-4-phenyl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-4-pyridin-3-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-4-pyridin-4-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-7-bromo-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-7-phenyl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-7-pyridin-3-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-7-pyridin-4-yl-2,3-dihydro-isoindol-1-one;

(R)-2-(1-Aza-bicyclo[2.2.2]oct-3-yl)-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-5-(4-methyl-piperazin-1-yl)-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-5-morpholin-4-yl-2,3-dihydro-isoindol-1-one;

5-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-2-bromo-5,6-dihydro-furo[2,3-*c*]pyrrol-4-one;

5-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-2-phenyl-5,6-dihydro-furo[2,3-*c*]pyrrol-4-one;

5-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-2-pyridin-3-yl-5,6-dihydro-furo[2,3-*c*]pyrrol-4-one;

5-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-2-pyridin-4-yl-5,6-dihydro-furo[2,3-c]pyrrol-4-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-(3-chloro-phenyl)-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-(4-chloro-phenyl)-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-quinolin-8-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-benzo[1,3]dioxol-5-yl-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-(2-chloro-phenyl)-2,3-dihydro-isoindol-1-one;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-(2-methoxy-phenyl)-2,3-dihydro-isoindol-1-one;

N-[3-((R)-2-1-Aza-bicyclo[2.2.2]oct-3-yl-3-oxo-2,3-dihydro-1H-isoindol-5-yl)-phenyl]-acetamide;

2-(R)-1-Aza-bicyclo[2.2.2]oct-3-yl-6-morpholin-4-yl-2,3-dihydro-isoindol-1-one, [[or]]

4-((R)-2-1-Aza-bicyclo[2.2.2]oct-3-yl-3-oxo-2,3-dihydro-1H-isoindol-5-yl)-N,N-dimethyl-benzamide; or

a pharamaceutically acceptable salt thereof.

8.(previously presented) A compound according to Claim 1, wherein one or more of the atoms is a radioisotope of the same atom.

9. (currently amended) A compound according to Claim [[1]]3 or 4, additionally comprising one or more atoms selected from tritium, $^{18}F$, $^{123}I$, $^{125}I$, $^{131}I$, $^{75}Br$, $^{76}Br$, $^{77}Br$ or $^{82}Br$.

10. (canceled)

11.(original) A [[The]] method of treatment ~~or prophylaxis according to Claim 10, wherein the disorder is~~ of anxiety, schizophrenia, mania or manic depression comprising administering a therapeutically-effective amount of a compound according to Claim 3 or 4 to a subject suffering from said disease or condition.

12.(canceled)

13.(currently amended) [[The]] A method of treatment ~~or prophylaxis according to Claim 12, wherein the disorder is~~ of Alzheimer's disease, learning deficit, cognition deficit, attention deficit, memory loss, or Attention Deficit Hyperactivity Disorder comprising administering a therapeutically effective amount of a compound according to Claim 3 or 4 to a subject suffering from said disease or condition.

14.(original) A [[The]] method of treatment ~~or prophylaxis according to Claim 12, wherein the disorder is~~ of Parkinson's disease, Huntington's disease, Tourette's syndrome, or neurodegenerative disorders in which there is loss of cholinergic synapses.

15.(currently amended) A method of treatment ~~or prophylaxis~~ of jetlag, nicotine addiction, craving, pain, and for ulcerative colitis, which comprises administering a therapeutically effective amount of a compound according to Claim [[1]]3 or 4.

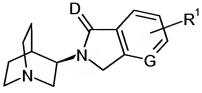
16.(currently amended) A method for inducing the cessation of smoking which comprises administering an effective amount of a compound according to Claim [[1]]3 or 4.

17.(currently amended) A pharmaceutical composition comprising a compound according to Claim [[1]]3 or 4 and a pharmaceutically-acceptable diluent, lubricant or carrier.

18.(canceled)

19. (New) A compound according to claim 4, wherein:

said compound is an R-stereoisomer in accord with formula V,




V,

or pharmaceutically-acceptable salt thereof.